

Remarks

The amendments to the claims are intended to better distinguish the subject matter sought to be patented from some of the references made of record by specifically acknowledging that the ionomer/polyamide blend of the instant application are categorically thermoplastic alloys based on combining or mixing a neutralized or partially neutralized ethylene/ α,β -unsaturated carboxylic acid copolymer (ionomer) with a thermoplastic polyamide (nylon) polymer as disclosed in Talkowski U.S. Pat. No. 5,866,658; incorporated by reference at page 4, line 15, of the specification. Claims 7 and 9 are also amended to acknowledge a lower concentration limit of 2.5 parts by weight for the rubber or elastomeric type additive per one parts by weight ionomer/polyamide blend as specifically supported by Run 4 in Table 1 wherein TRX 101 is present at 2.5 weight %. In view of the support for these amendments in the specification as originally filed it is felt that the amendments do not represent new matter.

At present, Claims 7 through 10 are rejected under 35 U.S.C. 102(b) as being anticipated by a patent issued to Talkowski (U.S. 5,866,658). Reconsideration of this rejection is requested.

In asserting the above rejection the Office Action states that Talkowski discloses a composition containing a blend of ionomer and polyamide (Abstract) to which may be added "metallic colors" (column 3 line1).

As amended, Claim 7 and 9 (hence dependant Claims 8 and 10) now acknowledge that the metallic pigmented ionomer/polyamide "alloy" blend of the instant invention also contains "from 1.5 to twenty parts by weight" (per one hundred parts of the blend) of an additive (very low density polyethylene (VLDPE), maleic anhydride grafted VLDPE, ethylene propylene (EPR) rubber, maleic anhydride grafted EPR, ethylene propylene diene monomer rubber (EPDM), maleic anhydride grafted EPDM, and mixtures thereof). The Talkowski reference does not teach a composition affirmatively containing such additive or the reason for adding such an additive. In view of this

difference there exists a basis for the withdrawal of the §102 rejection and such action is requested.

At present, Claims 1 through 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over a patent issued to Wang et al. (U.S. 5,599,877). Reconsideration of this rejection is requested.

In asserting the above rejection the Office Action states, in part, that Wang et al. discloses a composition containing an ionomer containing a low molecular weight ethylene acrylic acid copolymer to increase processability and notes specifically Example 25 in support of this statement. The Office Action continues by noting that the compositions of Wang et al. may contain polyamide and specifically identifies the teaching at column 16, line 54.

In contrast to the above statement, Claim 1 (as amended) involves a ionomer/polyamide "alloy" blend to which is added low molecular weight copolymer of ethylene and either acrylic acid, methacrylic acid or a mixture thereof as the other comonomer. In other words, the compositions of the present invention involve an additive containing significant carboxyl groups being present (i.e., low molecular weight ethylene acid copolymer). In contrast the additive in Example 25 of Wang et al. is an ethylene methyl acrylate copolymer with no acid functionality. Similarly, even the ionomer in Example 25 is free of acid functionality (note synthesis involving saponification of an ethylene methyl acrylate copolymer). Again in contrast, the ionomer/polyamide "alloy" blend of the instant invention is clearly distinguishable from ionomer used in Example 25 in that the ionomer/polyamide "alloy" blends involve a morphology wherein the ionomer is dispersed in a continuous or co-continuous polyamide phase. As taught at page 4 of the specification, this desired morphology (involving two phases) is typically achieved at high weight percent loading of both the polyamide and ionomer and typically involves intentional further neutralization of the acid functionality of the ionomer during blending with the polyamide to produce a viscosity inversion (i.e., leading to polyamide continuous phase). No such description is present in Example 25 of the Wang et al. reference because the end product is not categorically an ionomer/polyamide "alloy" blend.

Furthermore, the teaching at column 16, line 54, does not amount to the production of an ionomer/polyamide "alloy" blend. Looking at the paragraph prior to this teaching it is obvious that Wang et al. is identifying other polymers that can be added to the ionomer to make a peelable seal. One skilled in this art would readily recognize this as not teaching the production of an ionomer/polyamide "alloy" blend that is intended to be used as a structural thermoplastic. The paragraph immediately after this teaching confirms this interpretation and clearly identifies compatible blends with little or no phase separation as being significant in heat seal and hot tack properties (again a concept foreign to the instant invention). This interpretation is further supported at column 16, lines 29-32, wherein the generic blending taught in the Wang et al. reference is clearly described as involving compatible blends (i.e., little or no phase separation according to the teaching at column 16, lines 63-64). It is Applicant's position that one skilled in this art will readily recognize that Wang et al. is describing in heat seal and hot tack control by polymer blending a concept involving relatively minor amounts of polymer addition at a compatible loading level (single phase) more analogous to the addition of an antiblocking agent to control film adhesion and that this concept is acknowledged in the art as functionally separate from two phase ionomer/polyamide "alloy" blend used as thermoplastic resins.

In view of these differences and in particular the lack of critical elements such as ethylene acid copolymer additive and production of an ionomer/polyamide "alloy" blend it is felt that the teaching associated with Example 25 and column 16, line 54 of Wang et al. does not and cannot represent a *prima facie* showing of obviousness. Thus it is further felt that there is a basis for the withdrawal of this §103 rejection and such action is requested.

At present, Claims 1 through 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over a patent issued to Swidler (U.S. 5,840,453). Reconsideration of this rejection is requested.

In asserting the above rejection, the Office Action states, in part, that Example 14 of Swidler discloses that AC 540 tradename material may be

used, that applicant uses AC 540 (and AC 201) and that this material is an ethylene acrylic acid and thus can be "viewed as an ionomer". The Office Action also states that column 8, line 45, discloses that polyamides may be added to the composition. And, it is further asserted that Example 14 contains zinc oxide, a metal containing white pigment. However, the Examiner has indicated that Example 14 does not have polyamide present.

In contrast to the above, ethylene acrylic copolymer is not an ionomer nor can it be considered an ionomer. The Example 14 is not using the ethylene acrylic acid copolymer as an additive to an ionomer/polyamide "alloy" blend. Example 14 is using the ethylene acrylic acid copolymer as the resin that supplies the necessary "specific salvation sites" for the purpose of serving as the charge director on the toner surface (to complex/solvate metal salts). No analogous functionality is present in the instant invention. Careful reading of the column 8, including line 45, will establish that Swidler is teaching that amide-containing polymer can be used as a resin to supply specific salvation sites. In other words, nylon for purposes of the Swidler is an alternative to the ethylene acrylic acid copolymer of Example 14. No basis for the assertion of adding polyamide to the ethylene acrylic acid copolymer of Example 14 is being taught. Similarly, the reference to zinc oxide photoconductors and the respective sharp dense images has no relevance to the instant claimed subject matter. Functionally, the zinc oxide used in the instant invention is a so-called Brönsted base anhydride that serves to further neutralize carboxyl groups of the ionomer during the coextrusion production of the ionomer/polyamide hence creating a viscosity rise in the ionomer phase and consequential phase inversion to produce the desired morphology associated with an ionomer/polyamide "alloy" blend. No such corresponding functionality exists in the Swidler reference.

In view of these differences, it applicant's attorney's position that the Swidler reference does not constitute relevant prior art under *Graham v. Deere*. Further, the reference does not and cannot serve as a basis for a *prima facie* showing of obviousness under 35 U.S.C. 103(a) and as such this §103 rejection, as a issue of law, should be withdrawn. Such action is requested.

In view of the above brief remarks, it is felt that all claims are now in condition for allowance and such action is requested. Should the Examiner believe that an interview or other action in Applicant's behalf would expedite prosecution of the application, the Examiner is urged to contact Applicant's attorney by telephone at (302) 992-6824.

Respectfully submitted,

A handwritten signature in cursive script that reads "Robert B. Stevenson".

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Dated: June 20, 2003